

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DENNIS RAYMOND KOLODZIEJ,
MATTHEW JAMES BOEHLEFELD,
and
ANDREW SIMONOW

Appeal No. 2000-1304
Application No. 08/994,974

ON BRIEF

Before CALVERT, FRANKFORT, and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Dennis Raymond Kolodziej et al. originally took this appeal from the final rejection of claims 1 and 3 through 15 dated April 6, 1999 (Paper No. 6). The examiner subsequently reopened prosecution and entered a superseding final rejection of the same claims dated August 4, 1999 (Paper No. 9). Upon the appellants' request pursuant to 37 CFR § 1.193(b)(2)(ii),

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the appeal has been

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reinstated with respect to the second final rejection. Claims 1 and 3 through 15 constitute all of the claims pending in the application.

THE INVENTION

The invention relates to a method for restoring worn hubs on the impeller and turbine elements of a torque converter housing. Claim 1 is illustrative and reads as follows:

1. A method for modifying a substantially cylindrical hub of a torque converter wheel, comprising the steps of:

forming a right circular hollow cylindrical sleeve having an inner surface and outer surface, the outer surface of the sleeve having an outer diameter, the inner surface of the sleeve having an inner diameter sized to fit over the outer surface of the hub;

fitting the sleeve over the outer surface of the hub;
and

fixing the sleeve to the outer surface of the hub against displacement relative thereto.

THE PRIOR ART

The items relied upon by the examiner as evidence of obviousness are:

Sheen	2,752,668	Jul. 3, 1956
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The prior art discussed on pages 1, 2, 4 and 5 of the appellants' specification (the admitted prior art).

THE REJECTION

Claims 1 and 3 through 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Sheen.

Attention is directed to the appellants' brief (Paper No. 10) and to the examiner's answer (Paper No. 13) for the respective positions of the appellants and the examiner with regard to the merits of this rejection.¹

DISCUSSION

As discussed on pages 1, 2, 4 and 5 of the appellants' specification, the admitted prior art recognizes the problem of scored and/or worn torque converter hubs and contemplates a number of solutions including (1) replacing the entire torque converter element (impeller or turbine) carrying the hub, (2) replacing the hub on the existing element, and (3) reconditioning the hub on the existing element by diametrically expanding and refinishing it. It is not

¹The second final rejection (Paper No. 9) contained a number of additional 35 U.S.C. § 103(a) rejections. Upon reconsideration (see page 2 in the answer), the examiner has withdrawn all of these additional rejections, leaving for review the sole rejection set forth above.

disputed that the admitted prior art teaches, or would have suggested, a method meeting all of the steps in independent claims 1, 7 and 14 except for those relating to the use of the right circular hollow cylindrical sleeve.

Sheen discloses a method of salvaging internal combustion engine pistons having worn piston ring grooves. The method includes the steps of "removing the original ring carrier by machining or otherwise and then shrinking into the recess remaining a premachined annular ring carrier having inside and outside diameters of predetermined dimensions such that upon the completion of cooling, the outside diameter becomes axially continuous with the periphery of the main piston body" (column 1, lines 51 through 57). As shown in Figure 2, the replacement ring carrier 16 which is heat shrunk into the recess 14, 15 on the main piston body 10 takes the form of a right circular hollow cylindrical sleeve. Sheen suggests (see column 1, lines 18 through 30) that the foregoing method is a desirable alternative to more costly and time-consuming piston-salvaging techniques.

In combining the admitted prior art and Sheen to reject the appealed claims, the examiner concludes that it would have

been obvious to one of ordinary skill in the art

to repair the worn hub of [the admitted prior art] by removing the worn portion of the hub and shrink fitting a sleeve over the resulting reduced diameter portion of the hub, as taught by Sheen, to avoid complete replacement of the impeller or turbine, or to avoid replacement of the entire hub portion of the impeller or turbine [answer, page 5].

The threshold issue in this appeal is whether Sheen is non-analogous art as urged by the appellants. In an obviousness determination under 35 U.S.C. § 103(a), art which is non-analogous is too remote to be treated as prior art. In re Clay, 966 F.2d 656, 658-59, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). There are two criteria for determining whether art is analogous: (1) whether the art is from the field of the inventor's endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. Id.

The examiner concedes (see page 8 in the answer) that Sheen is not from the field of the appellants' endeavor: torque converters. Nonetheless, the examiner submits that "Sheen is directed to the same problem with which [appellants

are] concerned, i.e.[,] salvaging a worn cylindrical component by removing the worn portion of the component and replacing it with a cylindrical sleeve" (answer, page 8).

The examiner's position here is persuasive. The salvaging method disclosed by Sheen clearly is reasonably pertinent to the particular problem with which the appellants were involved, i.e., providing "an efficient, inexpensive, effective technique for repairing or restoring the hub of a torque converter housing . . . [wherein] [t]he hub is turned to a smaller outer diameter than its original size and a sleeve . . . is fitted to the turned outer hub surface" (appellants' specification, page 3). Thus, Sheen constitutes analogous art which was properly considered by the examiner in assessing the obviousness of the subject matter on appeal.

Moreover, and notwithstanding the appellants' various arguments to the contrary, the cost and efficiency benefits implied by Sheen would have provided the artisan with ample suggestion to modify the substantially cylindrical hub of the admitted prior art torque converter wheel by fitting and fixing a right circular hollow cylindrical sleeve to the outer surface of the hub, thereby arriving at the methods recited in

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independent claims 1 and 14.

Therefore, we shall sustain the standing 35 U.S.C. § 103(a) rejection of claims 1 and 14 as being unpatentable over the admitted prior art in view of Sheen.

We also shall sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 3 and 15 as being unpatentable over the admitted prior art in view of Sheen since the appellants have not challenged such with any reasonable specificity, thereby allowing these claims to stand or fall with parent claims 1 and 14, respectively (see In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987)).

Claims 4 through 6 depend from claim 1 and require the hub and sleeve to be fixed together using adhesive (claim 4), welding (claim 5) or brazing (claim 6). The record does not show that any of these well known fixing expedients solves a stated problem or presents a novel or unexpected result. In this light, the examiner's conclusion (see page 5 in the answer) that they would have been obvious matters of design choice within the skill in the art is well taken (see In re Kuhle, 526 F.2d 553, 555, 188 USPQ 7, 8-9 (CCPA 1975)).

Hence, we shall sustain the standing 35 U.S.C. § 103(a)

rejection of claims 4 through 6 as being unpatentable over the admitted prior art in view of Sheen.

Finally, independent claim 7 is more specific than independent claims 1 and 14 in that it requires the outer surface of the right circular hollow cylindrical sleeve to be harder than the material of the outer surface of the hub. In short, the examiner's conclusion (see page 5 in the answer) that the admitted prior art and Sheen would have suggested a method embodying this feature has no factual basis in the fair teachings of these prior art items.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 7, or of claims 8 through 13 which depend therefrom, as being unpatentable over the admitted prior art in view of Sheen.²

SUMMARY

The decision of the examiner to reject claims 1 and 3 through 15 under 35 U.S.C. § 103(a) is affirmed with respect

²Upon return of the application to the technology center, the examiner should consider whether the limitations recited in claim 8 find clear support or antecedent basis in the remainder of the specification as required by 37 CFR § 1.75(d)(1).

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to claims 1, 3 through 6, 14 and 15, and reversed with respect
to claims 7 through 13.

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No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR §
1.136(a).

AFFIRMED-IN-PART

IAN A. CALVERT))
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
JOHN P. McQUADE)	
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CEM:hh

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